

EXHIBIT 4

**U.S. Fish and Wildlife Service/U.S. Army Corps of Engineers:
Record of Decision**

RECORD OF DECISION

U.S. Army Corps of Engineers

**U.S. Department of the Interior
Fish and Wildlife Service**

Bolsa Chica Lowland Restoration Project Orange County, California

This Record of Decision (ROD) has been developed by the U.S. Army Corps of Engineers (USACE) and the U.S. Fish and Wildlife Service (Service) in compliance with the agency decision-making requirements of the National Environmental Policy Act of 1969 (NEPA), as amended. The Service and USACE are NEPA co-lead agencies on preparation of the Environmental Impact Statement (EIS) and information in that document is hereby incorporated into this ROD. The ROD will be signed jointly by the USACE and the Service. The purpose of the ROD is to document the decision of the Corps and the Service for the selection of an alternative for implementing the Bolsa Chica Lowland Restoration Project (Project). By agreement, the Service will construct the Project. While both a project planning participant and NEPA co-lead, the USACE also regulates some of the restoration activities pursuant to the Clean Water Act Section 404 (33 U.S.C. 1344) and Rivers and Harbors Act Section 10 (33 U.S.C. 403). USACE, Regulatory Branch, will, in addition, independently complete its own ROD when the USACE permit is issued. Pursuant to the California Environmental Quality Act (CEQA), the State Lands Commission (SLC) was State lead agency in the joint preparation of the Environmental Impact Report (EIR).

This ROD is designed to: a) state the Corps and Service decision; b) identify the alternatives considered in reaching the decision; and c) state whether all means to avoid or minimize environmental harm from implementation of the selected alternative have been adopted (40 CFR 1505.2).

Background

In 1996, eight state and federal agencies including the California State Lands Commission (SLC), U.S. Environmental Protection Agency (EPA), the State of California Department of Fish and Game (CDFG), the California State Coastal Conservancy (SCC), the National Marine Fisheries Service (NMFS), the California Resources Agency (CRA), USACE, Service, and the Ports of Los Angeles and Long Beach (the Ports) consummated an interagency agreement to establish a project for wetlands acquisition and restoration at the Bolsa Chica Lowlands. The property acquisition by SLC using Port funds was completed in 1997 and restoration planning was completed in April 2001 when the Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR) was published. The Service is to complete final design and construction. By agreement, the long-term land manager is to be determined at the end of construction.

The main project purpose is to restore the wetland ecosystem. A secondary purpose is compensation for Marine Habitat Losses Incurred by Port Development Landfills within the Harbor Districts of the Cities of Los Angeles and Long Beach, California.

PROJECT DESCRIPTION

In brief, the Project would restore tidal influence from the Pacific Ocean to about half of the Bolsa Chica Lowlands project area (1247 acres) to reinvigorate the wetland ecosystem and retain the existing conditions in the other half. To achieve the intended biological benefits of tidal restoration, a direct connection to the ocean must be reestablished. Measures for significant expansion of tidal flows through existing waterways of Anaheim Bay and Huntington Harbor were not feasible.

With the proposed plan, Bolsa Chica would include a 367-acre basin that would receive full tidal action resulting in a diverse and productive wetland ecosystem. An adjacent 200-acre area would receive muted tidal action from the full tidal basin. About 2.7 million cubic yards (cy) of material would be removed from about 175 acres within the tidal basin. This area would be deepened to about 6-7 feet below mean sea level (MSL). Culvert connections would be installed through the levee to admit muted tidal influence to areas already mostly below MSL.

Twenty upland acres would be created to support three nesting habitat islands for the federally-listed Endangered California least tern and Threatened western snowy plover and 19 acres would be restored to a dune plant community for sensitive species. Existing oil wells, water injection wells, well pads, pipelines, and access roads would all be removed only from the full tidal basin. The seasonal ponds and future full tidal area (about 387 acres), the State Ecological Reserve known as Inner and Outer Bolsa Bay (about 210 acres), the East Garden Grove-Wintersburg Flood Channel (15 ac), and the oil field operation would not be altered outside the tidal and muted tidal basin.

A direct connection to the ocean (inlet) would be constructed at the southerly end of the project area near the Huntington Mesa where the beach is narrower and few beach facilities exist. About 1.3 million cy of the tidal basin dredged material (>80% sand and clean) would be used to prefill the ebb shoal. The remainder of the dredge material would be used to create the full tidal basin levees (456,000 cy), three nesting areas (366,000 cy), beach nourishment fills (190,000 cy), and a raised intertidal shelf for cordgrass (98,300 cy). As much as 253,000 cy would be hauled offsite. To stabilize the new inlet, two jetties would be constructed across the beach (about 360 feet wide and 450 feet long from the highway).

To prevent any rise in the existing, shallow groundwater levels immediately inland of the restored wetlands, a french drain would be constructed between the wetlands and the existing residential houses. This gravel-filled trench would draw down groundwater beneath the houses and discharge it to the restored wetland or existing flood channel.

Pacific Coast Highway (PCH) runs between Bolsa Chica, and the State Beach and ocean, requiring a new bridge to be built over the inlet. The PCH Bridge over the inlet would be wide enough to accommodate four traffic lanes and a separate safety vehicle/bike path for the local beach traffic. A separate bridge, just inland of PCH, will be provided for heavy equipment access to the remaining oil field. Roadway drainage improvements and revetments would be constructed in the inlet/PCH bridge vicinity to maintain water quality in the wetland and prevent bank erosion, respectively.

Once the tidal currents flow in and out of the inlet, a shoal will form just inside the inlet (flood shoal). Tidal flow through the inlet is essential to retaining the habitat values created by the project. Maintenance dredging of about 250,000 to 300,000 cy from the flood shoal is expected every two years. Sand from the flood shoal maintenance dredging would be placed on the adjacent beaches where needed, as determined by the beach monitoring plan.

Construction would occur in four phases and would avoid or minimize impacts to fish and wildlife resources, coastal traffic, and beach recreation. Phase 1 (September-March) includes clearing and grubbing the full tidal basin, west half bridge and PCH detour construction, and inlet construction. Phase 2A (March to September) includes completion of PCH bridge, levees and revetments of the full tidal basin, the french drain, cordgrass shelf, and preparations to begin dredging in the full tidal basin. Phase 2B includes hydraulic dredging of the full tidal basin, pre-filling the ebb shoal, constructing inlet jetties, PCH revetments, and nesting areas. Phase 3 includes muted tidal area culverts, salvage revegetation, and removal of some staging areas. Phase 4 includes completion of dredging, if necessary, opening of the inlet, and demobilization of construction equipment.

Although no eligible cultural resources have been found within the Project area, there is a slight chance a previously unknown cultural resource could be discovered during construction. Archaeological monitors would be present during construction, and if cultural resources were uncovered, proper procedures would be followed. Following the site investigation, work efforts might be permitted with modifications, per 36 CFR 800.13.

In summary, the Proposed Project would result in a substantial net gain in habitat value compared to existing conditions without incurring significant adverse impacts. Based on the findings presented in the FEIS/FEIR, the Proposed Project could achieve a maximum of 1,800 habitat units in total, whereas the no action would achieve a maximum of 290 units.

DECISION

The Preferred Alternative is referred to as the Proposed Project in this document. The Proposed Project and alternatives have been fully described and evaluated in the April 2001 FEIS/FEIR. More specific analysis of available sand for the construction of the ebb shoal (Dredge Plan), a beach profile monitoring plan, and a biological monitoring plan have been incorporated into the Project to address specific regulatory needs. Based upon the review of alternatives and their environmental consequences described in the FEIS/FEIR, the Service's Biological Opinion, and

the Statement of Findings, the decision of the Corps and Service is to adopt the Proposed Project and its mitigation measures.

Decisions of Others

The California Coastal Commission, pursuant to the California Coastal Act and the Federal Coastal Zone Management Act, provided concurrence with the final Consistency Determination for the Proposed Project in November 2001. The State Lands Commission, pursuant to CEQA, certified the Final Environmental Impact Report (FEIR) as complete and adopted the Proposed Project on January 30, 2002. The Region 8 Water Quality Control Board Clean Water Act Section 401 Certification was provided April 23, 2002. Later, a stormwater discharge permit will likely be necessary for Project construction. USACE would issue the Section 404/10 permit.

The Service Biological Opinion (BO), prepared in accordance with Section 7 of the Endangered Species Act (ESA), concluded that the Project will not jeopardize the continued existence of the western snowy plover and no incidental take of western snowy plover is anticipated due to construction timing and protective measures implemented as part of the Proposed Project.

ALTERNATIVES

For the FEIS/FEIR, an array of alternatives was developed and evaluated against project criteria, and based on the purpose and need. A co-equal analysis was completed for potentially viable project alternatives, including the No Action Alternative. Following is a brief summary of the alternatives assessed in the FEIS/FEIR:

A total of fourteen alternatives were evaluated against screening criteria, which included purpose and need, technical feasibility, economic feasibility, and environmental and consolidation criteria. The FEIS/FEIR analyzed eight project alternatives including the no-action alternative, the proposed project, and six other inlet locations and flood channel alignments.

No Action Alternative. No alterations to the existing water influences in the Bolsa Chica Lowlands would occur. With the No Action Alternative, no enhancement of the biological value of the Bolsa Chica Lowlands would occur. A maximum of about 290 habitat units are generated by the existing condition.

1st Sub-Alternative - Restoration of the Future Full Tidal Area Concurrently with Restoration of the Rest of the Wetlands. This sub-alternative is identical to the Proposed Action, except that the 252-acre, future full tidal area would be restored at the same time as the rest of the wetlands. Oil operations would be bought out, and existing wells and oil-related contaminants removed. This sub-alternative could only be completed if one of the full tidal alternatives were also completed.

2nd Sub-Alternative - Restoration of the Future Full Tidal Area Concurrently with Restoration of the Rest of the Wetlands (Expanded Full Tidal Basin). This sub-alternative is

identical to the 1st Sub-Alternative, except that grading would occur in the inter- and sub-tidal areas to further increase the biological benefits of the area; it is predicted that this alternative could generate approximately 2,141 habitat units.

Alternative 1 - Concept Plan with Entire Flood Diversion. Alternative 1 is similar to the Proposed Project, except that all flows from the East Garden Grove-Wintersburg (EGGW) Flood Control Channel would be routed into the full tidal basin, not Outer Bolsa Bay. This alternative could generate approximately 1,353 habitat units.

Alternative 2 - Full Tidal Basin with a New Ocean Inlet Near Rabbit Island. Alternative 2 is similar to Alternative 1, except that the inlet location would be cut near Rabbit Island where the EGGW Flood Control Channel currently discharges into Outer Bolsa Bay. The connection between Outer Bolsa Bay and Inner Bolsa Bay would be blocked. This alternative could generate approximately 1,477 habitat units.

Alternative 3 - Full Tidal Basin with a New Ocean Inlet Near Warner Avenue. Under this alternative, the existing connection between Huntington Harbor and Outer Bolsa Bay would be blocked and a new tidal inlet would be constructed at the northern portion of Bolsa Chica State Beach, near the intersection of Warner Avenue and PCH. Like Alternative 2, all EGGW Flood Control Channel flows would be discharged into the new full tidal basin. Muted tidal habitat consisting primarily of pickleweed salt marsh and mudflats would be created northeast of the new tidal basin and connected to the full tidal basin by culverts.

Alternative 4 - Three Jetty Plan. Alternative 4 is similar to Alternative 2 and includes a full tidal basin with a new ocean inlet near Rabbit Island. However, the EGGW Flood Control Channel would discharge directly to the ocean through an outlet channel that would be separate from the tidal inlet. Muted tidal habitat consisting primarily of pickleweed salt marsh and mudflats would be created northeast of the new tidal basin and would be connected to the full tidal basin by culverts. It is predicted that this alternative could generate approximately 1,413 habitat units.

Alternative 5 - Irrigation/Water Management Plan. With Alternative 5, the gates of the EGGW Flood Control Channel would be moved about 1,800 feet upstream. A series of culverts with water management structures would be installed along the lower portions of the channel. Seawater would be introduced to the Bolsa Lowlands from Anaheim Bay/Huntington Harbor via Outer Bolsa Bay. Alternative 5 would improve habitat in the Bolsa Lowlands by managing very limited seawater and freshwater inputs. Seasonal freshwater pond habitat would be maintained in the southeast corner and the northeast corner of the Project site. Nesting islands would be created for western snowy plovers and California least terns. There would be no (or little) benefits for marine fishes or the light-footed clapper rail. The overall predicted increases to wetlands function and values to be generated by this alternative are 581 habitat units. As this alternative would not require an inlet, the impacts described for the Proposed Project, or any alternative with an inlet, would not exist with this alternative.



Alternative 6 - Concept Plan. Alternative 6 would be identical to the Proposed Project, except that a side weir would be installed into the levee of the EGGW Flood Control Channel to allow spillover of a portion of the 100-year peak flood discharge into the full tidal basin. During peak storm flows, runoff from the EGGW Channel would be split between Outer Bolsa Bay and the tidal basin of the restored wetlands. Flows from the EGGW Channel would begin to spill into the full tidal basin during a 10-year storm. It is predicted that this alternative could generate approximately 1,528 habitat units.

RATIONALE FOR DECISION

The selection of the Proposed Project was based on two considerations: a) the extent to which wetland function and values within the Bolsa Lowlands would be improved, i.e., the ability of the selected alternative to meet the project purpose and need, and b) the lesser extent of significant, adverse impacts that would result from project implementation.

All of the tidal inlet alternatives would provide similar habitat benefits including:

1. increased quality and quantity of open water and intertidal mudflat habitats for migratory shorebirds, seabirds, and waterfowl;
2. a healthy and diverse aquatic community of marine and estuarine invertebrates and fishes including nursery habitat for the California halibut;
3. increased nesting habitat and foraging opportunities for the state- and federal-listed endangered California least tern and the federal-listed threatened western snowy plover, as well as a variety of other water-associated birds;
4. expansion of cordgrass habitat to support nesting by the State and Federal-listed endangered light-footed clapper rail; and
5. enhancement of pickleweed salt marsh habitat that would expand nesting territories of the State-listed endangered Belding's savannah sparrow.

Of all the restoration alternatives, the Proposed Project would provide the highest quality environment for aquatic fish and invertebrates because the EGGW Flood Control Channel would not discharge into the full tidal basin. Therefore, the disturbance to the aquatic community from the freshwater influx, trash, and pollutants during storm flows would not occur. Any inlet-induced aggravation of beach erosion will be avoided by pre-filling the cbb shoal, sand fill on the beach, and regular maintenance dredging of sand in the flood shoal.

Also, because the Proposed Project would have no discharges from the EGGW Flood Control Channel, metals and bacteria would not be carried directly into the wetlands and the ocean via urban runoff. Posting of health warnings or closures would not increase at adjacent beaches, since no bacteria or contaminants carried in the urban runoff would be routed through the tidal basin. All of the other tidal inlet alternatives (1-4, 6) would have a significant, unmitigable, adverse impact to water quality in the wetlands and coastal waters from pollutants in storm flows because they each would direct urban storm runoff through the wetland and to the ocean beaches. Indicator bacteria in ocean waters at the adjacent beaches would exceed legally mandated

thresholds and swimming and surfing would be restricted. Loss of swimming and surfing use of ocean waters during periods when bacteria exceeded threshold levels would be an unmitigable, significant, and an adverse impact to recreation.

The Proposed Project or Alternative 6 would not result in the permanent loss of beach parking spaces or in major disruption of the State Beach facilities or beach management. However, Alternatives 2, 3, and 4 would significantly impact the State beach operation and facilities, requiring elimination of parking areas, demolition of structures, and subdivision of the existing beach park operation.

Alternative 5 had the fewest adverse impacts because it would involve minimal construction. Also, because no tidal inlet would be constructed for Alternative 5, it would avoid temporary adverse impacts to water quality, recreation, and land use from construction of the tidal inlet and pre-fill of the ebb shoal at Bolsa Chica State Beach. However, Alternative 5 would provide, by far, the lowest habitat benefits of the restoration alternatives. Alternative 5 would provide no benefits to marine fishes such as California halibut and may even be detrimental to marine fishes that would enter the Lowlands during the limited periods of tidal action. No cordgrass would become established to benefit the highly endangered light-footed clapper rail. Alternative 5 would provide only a slight enhancement of overwintering habitat for migratory shorebirds, seabirds, and waterfowl. Foraging opportunities for the endangered California least tern and other tern and gull species would be only marginally increased. Alternative 5 would create more mosquito production than the existing condition. In contrast, the tidal alternatives would be less conducive to mosquitoes than the existing condition.

The Proposed Project was selected as preferred because it would provide much greater habitat benefits than Alternative 5, and would avoid the unmitigable, significant, adverse impacts to water quality and recreation that would occur with the other tidal inlet alternatives (1-4 and 6). Neither subalternative can be implemented, at this time, due to the continuing presence of the oil field operation in this part of Bolsa Chica and the infeasibility of buying out the reserves or consolidating oil into a smaller area.

STATEMENT OF FINDINGS

By adopting the Proposed Project and ensuring the mitigation measures will be implemented, all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted by the Service and the USACE.


PUBLIC INVOLVEMENT

The USACE and the Service, pursuant to the California Coastal Act, began a two-phased Consistency Determination. The California Coastal Commission concurred with the first phase Consistency Determination (the conceptual plan) at a public hearing in November of 1996. In addition the California Coastal Commission conducted a public workshop August 9, 2001. The

California Coastal Commission gave final concurrence of the Proposed Project's Consistency Determination at a public hearing on November 13, 2001.

The formal EIS/EIR public scoping hearing was begun on December 11, 1997 (62 FR 64366). The Draft EIS/EIR was circulated for public review between July 28, 2000 and October 16, 2000 (65 FR 46489), with the formal public comment hearing conducted on August 31, 2000. The FEIS/FEIR, including the Response to Comments, was publicly circulated on April 27, 2001 (66 FR 21174). No FEIS/FEIR comment letters were received. The USACE Public Notice for the Clean Water Act Section 404 and Rivers and Harbors Act Section 10 permit (9700-19300-RLK) was circulated for public comment from October 26, 2001 to November 26, 2001. Numerous informal public workshops were conducted between 1997 and 2001, including several public workshops before the Huntington Beach City Council.

All applicable laws, executive orders, regulations and local governmental plans were considered in evaluating the alternatives. The Proposed Project is the least environmentally damaging alternative and incorporates environmental design features or other means of avoiding or minimizing adverse environmental impacts. Based on review of these evaluations, we find that the sediment control benefits gained by construction of the recommended plan far outweigh any adverse effects. This Record of Decision completes the National Environmental Policy Act process.


Richard G. Thompson
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U.S. Army Corps of Engineers

4 June 02

Date


Acting Steve Thompson
Manager, California/Nevada Operations Office
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6-12-02

Date